

REMARKS

Claims 1, 3-12 and 15-19 remain in this application. Claims 1, 3-12 and 15-19 are rejected. Claims 1 and 15-17 are objected to. Claims 1, 3-6 and 15-17 are amended herein to clarify the invention and to address matters of form unrelated to substantive patentability issues.

Applicants herein traverse and respectfully request reconsideration of the rejection of the claims and objections cited in the above-referenced Office Action.

The Office Action states that the specification is objected to for including misspellings. Since the precise identity of these alleged misspellings is not indicated in the Office Action, it is assumed by applicants that the Examiner is objecting to the spelling of the term “capillarily.” The substitute specification is therefore amended to address use of this terminology. Furthermore, since the Examiner has requested applicants’ cooperation in correcting any errors that may be discovered, applicants have thoroughly reviewed the substitute specification and have further used a word processing program to check spelling throughout the document, in an effort to ascertain the absence of errors, related to spelling or otherwise. As a result thereof, no additional errors have been detected. No new matter is added by the amendments to the substitute specification. Withdrawal of the objection to the specification is therefore respectfully solicited.

Claim 1 is objected to for the use of the term “capillarity.” Claims 1-17 are objected to for depending from canceled claimed 13 and 14. The claims are accordingly amended to address these issues raised by the Examiner, and correct the noted informalities. Withdrawal of the objections is respectfully requested.

Claims 1, 3-12 and 15-19 are rejected under 35 U.S.C. § 112, first paragraph, as not being enabled by the specification. Applicants respectfully submit that the claims are properly enabled for reasons discussed below.

The determination of enablement turns on whether the specification contains a sufficient disclosure to enable one skilled in the art to practice the invention without the exercise of undue experimentation. What constitutes undue experimentation is determined using a standard of reasonableness. Factors to be considered include the quantity of experimentation necessary, the amount of direction or guidance presented, the existence of working examples, the state of the prior art, the nature of the invention, the predictability of the art and the breadth of the claims. *Ex parte Forman*, 203 U.S.P.Q. 546 (BPAI 1986).

In the present instance, the substitute specification provides at page 7, first full paragraph beginning at line 3, that liquid is supplied via conduits communicative with the capillary gaps serving as the liquid guideways. These conduits are disclosed, for example, as passing either through elevations of the body, as shown to the left of Fig. 1a, or through the opposite body, as depicted to the right of Fig. 1a. It would be readily apparent to one of ordinary skill in the art that, due to capillary

forces, liquid so introduced to the capillary gaps spreads along the capillary gaps and reaches the desired place over the specified paths defined by the liquid guideways. Accordingly, the disclosed pointwise delivery of liquid to the capillary gaps is effective to transmit liquid via and along the guideways defined by the configuration of the capillary gaps by operation of capillary action.

Based upon the foregoing, applicants respectfully submit that one skilled in the art would readily be able to implement the present invention as claimed without undue experimentation based on a reading of the specification as filed. Therefore, reconsideration of the rejection of claims 1, 3-12 and 15-19 is earnestly solicited.

Claims 1, 3-12 and 15-19 are rejected as indefinite under 35 U.S.C. § 112, second paragraph, for failing to particularly point out and distinctly claim the subject matter of the invention. The Office Action cites various informalities in the claim language including awkward wording and lack of antecedent bases. Claims 1, 3-6 and 15-17 are amended to clarify the claimed invention and to place the claims into conformance with U.S. claiming practice. The amendments were made with consideration of the various informalities noted in the Office Action. It is respectfully submitted that the amendments remove or correct the informalities noted in the Office Action. Regarding claim 6, the claim is amended to depend from claim 19, which thereby provides antecedent basis for the term "support plate." In addition, both claims 6 and 7 depend from claim 19, which in turn is dependent from claim 5, reciting the specialized case in which the body is in the form of a cover plate

and the opposite body is in the form of a support plate. Therefore, the later reference of a cover plate and a support plate in claims 6 and 7 finds clear antecedent support in claim 5, from which each of these claims depend. Therefore, reconsideration of the rejection of claims 1, 3-12 and 15-19 and their allowance are earnestly requested.

Claims 1, 10 and 12 are rejected as obvious over Aldrich et al. (US 5,279,791) under 35 U.S.C. §103(a). The applicants herein respectfully traverse this rejection. For a rejection under 35 U.S.C. §103(a) to be sustained, the differences between the features of the combined references and the present invention must be obvious to one skilled in the art.

It is respectfully submitted that a *prima facie* case of obviousness has not been established in the rejection of claims 1, 10 and 12. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20

USPQ2d 1438 (Fed. Cir. 1991)." MPEP §706.02(j) "Contents of a 35 U.S.C. §103 Rejection".

In accordance with the present invention as claimed in claim 1, multiple capillary gaps, configured to serve as predetermined guideways for transporting liquids by capillary forces therealong are provided, and recessed regions are disposed therebetween, which are capillary-inactive, thereby preventing transport of liquids between adjacent ones of the capillary gaps by capillary force. It is respectfully submitted that no such teaching or suggestion is present in Aldrich et al..

The Office Action freely admits that Aldrich et al. "does not explicitly disclose a plurality of elevations and recesses" as claimed. Therefore, in order to render the claimed invention of claim 1 obvious, the reference would have to contain the motivation to modify the reference in a manner which arrives at the claimed invention. Applicants respectfully submit that no such motivation is present in the cited reference.

The express purpose of the capillary gap 50 in Aldrich et al. is to operate to avoid spreading of liquid to a plurality of other possible spaces having capillary activity by retaining liquid therein, as supported by the disclosure, for example, at column 6, lines 37-42 of Aldrich et al.. Thus, one of ordinary skill in the art would have no reason (motivation) to provide multiple capillary gaps, each forming guideways designed for transporting liquids by capillary forces therealong, since

according to Aldrich et al., no liquid would ever reach any other guideway defined by adjacent capillary gaps.

Furthermore, the Aldrich et al. reference fails to disclose teaching relating to the claimed recitation of “at least one liquid supply including at least one liquid-conductive conduit communicative with a corresponding one of said capillary gaps for supplying liquid dosing to said capillary gaps.” The invention of Aldrich et al. merely concerns itself with the problem of preventing spilled liquid from reaching any existing capillary space surrounding a cartridge inserted into a slot of an analytical instrument. Therefore the provision of a liquid supply would serve no practical purpose in connection with the disclosure of Aldrich et al., which specifically is directed to the avoidance of spread of liquid due to inadvertent seepage thereof into an interior of a monitor, and would, in fact, be contrary to the stated goals thereof.

Thus, it is respectfully submitted that the rejected claims are not obvious in view of the cited reference for the reasons stated above. Reconsideration of the rejections of claims 1, 10 and 12 and their allowance are respectfully requested.

Claims 1, 3-5, 10, 11, 15 and 17 are rejected as obvious over Birch et al. (US 6,051,190) under 35 U.S.C. §103(a). The applicants herein respectfully traverse this rejection.

It is respectfully submitted that the disclosure of the Birch et al. reference is limited to deposition of liquid droplets carried on the wettable tip of a rod (or needle)

into a well. Contrary to the Examiner's statement that the elevations in Birch et al. are generally bar shaped, applicants respectfully submit that these elevations shown in Figs. 2 and 3 are rod-shaped, and in no way define "capillary gaps configured to serve as the predetermined guideways for transporting liquids by capillary forces therealong" as claimed in independent claim 1.

Moreover, the cited reference further fails to provide "at least one liquid supply including at least one liquid-conductive conduit communicative with a corresponding one of said capillary gaps for supplying liquid dosing to said capillary gaps," as claimed in claim 1. Rather, in accordance with Birch et al., "[e]mpty rods from a transfer tool are lowered into liquid containing wells of a multi-well plate" where they are wetted, following which, this liquid, adhering to the rods, is transferred to a second multi-well plate (Col. 7, lines 39-42).

Thus, it is respectfully submitted that the rejected claims are not obvious in view of the cited reference for the reasons stated above, since the reference fails to disclose each and every feature of the claimed invention. Reconsideration of the rejections of claims 1, 3-5, 10, 11, 15 and 17 and their allowance are respectfully requested.

Claims 6-9, 18 and 19 are rejected as obvious over Birch et al. in view of Brown et al. (US 6,143,496) under 35 U.S.C. §103(a). The applicants herein respectfully traverse this rejection.

Applicants respectfully submit that Brown et al., offered merely for its teaching regarding the alleged use of spacers, fails to provide the teaching noted above, with regard to the rejection of independent claim 1, that is missing from the primary Birch et al. reference. Thus, the combination of prior art references fails to teach or suggest all the claim limitations. Therefore, reconsideration of the rejections of claims 6-9, 18 and 19 and their allowance are respectfully requested.

Claims 8, 9, 18 and 19 are rejected as obvious over Aldrich et al. in view of Brown et al. under 35 U.S.C. §103(a). The applicants herein respectfully traverse this rejection.

Applicants respectfully submit that Brown et al., offered merely for its teaching regarding the alleged use of spacers, fails to provide the teaching noted above, with regard to the rejection of independent claim 1, that is missing from the primary Aldrich et al. reference. Thus, the combination of prior art references fails to teach or suggest all the claim limitations. Therefore, reconsideration of the rejections of claims 8, 9, 18 and 19 and their allowance are respectfully requested.

Claim 16 is rejected as obvious over Birch et al. in view of Wilding et al. (US 5,304,487) under 35 U.S.C. §103(a). The applicants herein respectfully traverse this rejection.

Applicants respectfully submit that Wilding et al., offered merely for its teaching regarding the alleged use of a bio-chip as an opposite body, fails to provide the teaching noted above, with regard to the rejection of independent claim 1, that

is missing from the primary Birch et al. reference. Thus, the combination of prior art references fails to teach or suggest all the claim limitations. Therefore, reconsideration of the rejections of claim 16 and its allowance are respectfully requested.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,
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